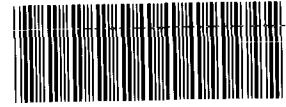


2E802

RF/RMRS-97-013



000066651

**Special Task Health and Safety Plan for
the IHSS 119.1 Investigation Project**

Revision: 0

April 1997

This Special Task Health and Safety Plan addresses the task specific hazards associated with the IHSS 119.1 Investigation Project. The IHSS 119.1 Investigation project will be conducted using this Health and Safety Plan for the task and area specific hazards, and the using the Health and Safety Plan for the Groundwater Program (RFP/ER-SAF-94-GMP) for programmatic and general hazards.

ADMIN RECCRD

1/24

DOCUMENT CLASSIFICATION
REVIEW WAIVER PER
CLASSIFICATION OFFICE

A-0001-001425

2. Project Description: Use Geoprobe to drill small diameter holes, collect Core, screen using a PID/FID, and collect samples for analysis. Sample will be used for health and safety plan for the proposal excavation, and to determine if there is a VOC source downgradient of the IHSS.

3. Location: IHSS 119.1 and downgradient, 881 Hillside area, OU 1

4. Facility/Work Site Description: Flat lying to slightly sloping, south facing hillside.

5. Proposed Personnel and Tasks:

Project Manager Annette PRIMROSE

Field Team Leader John Boylan

Proposed Field Team	Job Function/Tasks
Annette PRIMROSE	stake locations
FRED GRIGSBY	supervise Geoprobe team
John Boylan	Geologist
HAROLD Sanchez	RCT/HSS support
Kim Jackson	
Ray Michaels	Geoprobe & sample collection
Greg Stretesky	

GROUNDWATER MONITORING PROGRAM SUBCONTRACTOR

SPECIAL TASK

HEALTH AND SAFETY PLAN

Revision Level 0

Job No. _____

Page 1 of 14 ^{AP 4/29/97} 23

1. Items 1-9 to be completed by EG&G Special Task Project Manager.

Project Name IHSS 119.1 : Downgradient Investigation

Task Collect core and analytical samples using the Geoprobe

Requested by Annette PRIMROSE

Proposed Start-Up Date April 28 1997 Project/Task No. CM9200 SG

Rev. Level _____

Prepared by/Reviewed by Groundwater Monitoring Program Subcontractor
Health and Safety Officer

Printed Name _____

Signature _____ Date _____ 19

Reviewed by Groundwater Monitoring Subcontractor Site Safety Officer

Printed Name _____

Signature _____ Date _____ 19

Approved by EG&G Special Task Project Manager

Printed Name _____

Signature _____ Date _____ 19

Title _____

Note to Project Managers:

A signed and completed copy of the Health and Safety Plan and a signed and completed copy of the safety briefing (p. 14) must be included in the project file.

2

6. Confined Space Entry

A confined space is defined as any space not currently used or intended for human occupancy, having a limited means of egress, which is subject to the accumulation of toxic contaminants, a flammable or oxygen deficient atmosphere, or other hazards, such as engulfment, or electrical or mechanical hazards should equipment be inadvertently activated while an employee is in the space. Confined spaces include but are not limited to storage tanks, process vessels, bins, boilers, ventilation or exhaust ducts, air pollution control devices, smoke stacks, underground utility vaults, sewers, septic tanks, and open top spaces more than four feet in depth such as test pits, waste disposal trenches, sumps and vats.

Will this task require entry into any confined or partially confined space?

YES - Describe below

☒ No

7. Cutting and Welding

Will this task involve use of a cutting torch or welding?

YES - Describe below

☒ No

8. Other Potential Hazards

☒ Chemical

☒ Radiological

☐ Fire/Explosion

☐ Heat Stress

☐ Electrical

☒ Machinery/Mechanical Equipment

☒ Trips, Slips, Falls

☐ Trenching/Shoring

☒ Heavy Equipment/Vehicular Traffic

☐ Overhead Hazards

☒ Unstable/Uneven Terrain

☐ Other - Describe below

6,7,8 Description/Other

IHS 119.1 is a former drum storage site where radiological & VOC contamination leaked into the subsurface soil. The radiological contamination was removed; VOC contamination remains in the soil. The site has moving parts. Uneven terrain generates a slip, trip and fall hazard.

9. I, Annette Primeaux, attest that this information is accurate to the best of my knowledge and hereby request a Health and Safety Plan for the task(s) designated above.

Annette Primeaux 4/23/97
Signature Date

S.R. Pros. Manager
Title

10. Chemical/Radiological Hazard Evaluation

Waste Media

- ☒ Airborne Contamination
- ☒ Surface Contamination
- ☒ Contaminated Soil
- ☒ Contaminated Groundwater
- ☐ Contaminated Surface Water
- ☐ Solid Waste
- ☐ Liquid Waste
- ☐ Sludge

Hazardous Characteristics

- ☐ Ignitable
- ☐ Corrosive
- ☐ Reactive
- ☐ Explosive
- ☐ Toxic (non-radiological)
- ☐ Radioactive

Substance

This task will involve the reasonable possibility of exposure to the substances listed below at concentrations or in quantities which may be hazardous to the health of the site personnel.

See attached table of concentrations

Primary Hazard (Rate: low, med, high, ext)

Substance	Inhalation of Gases/ Vapors	Inhalation of Dusts/ Mists	Ingestion	Dermal Absorption of Solids/ Liquids and/or Skin Contam.	Dermal Absorption of Gases/ Vapors	Corrosive/ Irritant	Ignit- ability	Reactivity/ Explosion
Carbon tetrachloride								
1,1, Dichloroethene								
Tetrachloroethene								
1,1,1 Trichloroethane								
Trichloroethene								
Substance	Exposure Limit		IDLH Level		Health Effects			

Carbon Tetrachloride	5 ppm *	200 ppm						
1,1 Dichloroethene	100 ppm	4,000 ppm	3,000					MDS 4-25-77
Tetrachloroethene	25 ppm	150 ppm						
1,1,1 Trichloroethane	350 ppm	700 ppm						
Trichloroethene	50 ppm	1,000 ppm						

* Exposure limit ACGIH

13. Personal Monitoring

☐ Passive Dosimeter

☐ Personal Air Sampling

☒ Other Personal air monitoring/
sampling will be required
if readings continue to
stay above .1 ppm over
BKG after venting

Description/Other:

PID/FID

14. Biological Monitoring/Medical Surveillance

N/A

This project requires medical surveillance or biological monitoring procedures beyond the provisions of the routine medical surveillance program, see description below

Description:

15. Onsite Control

Control boundaries have been established, and the Exclusion Zone (the contaminated area), Hotline, Decontamination Line, Contamination Control Zone and Support Zone (clean area) have been designated and are identified as follows: Orange cones and caution tape around work area and support zone to keep non-trained people out.

(Name) HAROLD SANCHEZ has been designated to coordinate access control on the work site during this task. No unauthorized person shall be allowed beyond the Contamination Control line.

7

11. Ambient Air/Site Monitoring Procedures

The following instruments shall be used to monitor the work environment and workers' breathing zones prior to site entry and at the specified intervals.

Instrument	Monitoring Frequency				
ALP 4/23/97 ✓ PID (HNU, OVA) w/ EV lamp	Cont.	15min.	30min.	hourly	other _____
_____ OVA	Cont.	15min.	30min.	hourly	other _____
_____ Combustible Gas Indicator	Cont.	15min.	30min.	hourly	other _____
_____ H2S Detector	Cont.	15min.	30min.	hourly	other _____
_____ Colorimetric Detector Tubes	Cont.	15min.	30min.	hourly	other _____
_____ Other (describe below)	Cont.	15min.	30min.	hourly	other _____

Description/Other:

TVA 1000B Toxic Vapor Analyzer PID/FID

at sample surface and in
personnel breathing zones
during times of potential exposure.

12. Action Levels

Task personnel shall observe the following Action Levels:

Instrument	Action Level	Specific Action
TVA PID AND TVA FID	any sustained reading above background in the breathing zone.	If any sustained reading above background is present in the breathing zone, affected personnel will move upwind for a time period determined by the HSS.

instrument	Action Level	Specific Action
Mini-ram dust monitor	1.5 mg/m ³ sustained in the breathing zone	If 1.5 mg/m ³ dust levels are obtained in the breathing zone (sustained), apply water suppression and soil wetting using a small sprayer or other means.

Most likely, the VOC levels will
dissipate during this time and
personnel may return to the
work area.

If readings above background
in the breathing zone do not
dissipate, use a large fan to
remove the VOCs from the breathing
zone.

If the fan does not reduce VOC
readings to background, stop
work and contact RURS Health
and Safety.

Added - MDS 4-29-97

17. Decontamination

Personnel and equipment leaving the Controlled Zone shall proceed through the following decontamination stations and procedures from the decontamination zone:

Personnel Decontamination

Station

N/A

Procedure

Remove gloves so as not to contact skin.
If contaminated soil or liquid contacts gloves,
change immediately.

Equipment Decontamination

Station

Procedure

FO.3 PPE generally as specified in Section 16,
However if there is a potential for contact
with VOCs, The HSS will also require apron
or Saranex coveralls.

The following decontamination equipment is required: Liquinox or equivalent
DI water

Emergency decontamination procedures:

N/A

9

16. Personal Protective Equipment

Location	Job Function/Task	Initial Level of Protection
Controlled Zone	Level D protection unless RWP has more stringent requirements	B C <u>D</u> 1 2 3 other B C D 1 2 3 other B C D 1 2 3 other B C D 1 2 3 other
Decontamination Zone	Level D protection unless RWP has more stringent requirements	B C D 1 2 3 other B C D 1 2 3 other B C <u>D</u> 1 2 3 other B C D 1 2 3 other B C D 1 2 3 other

List the specific protective equipment and material (where applicable) for each of the Levels of Protection identified above

Level B _____

- ____ Pressure demand airline
- ____ Pressure demand airline with escape provisions
- ____ Pressure demand SCBA

Level C _____

- ____ Half face Air Purifying Respirator
- ____ Full face Air Purifying Respirator
- ____ Full face canister Air Purifying Respirator
- ____ Standard work clothes
- ____ Hard hat, steel toed boots, safety glasses
- ____ Ear protection during drill rig operation
- ____ Inner latex gloves
- ____ Outer NBR (Nitrile Butyl Rubber) gloves

Level D _____

Level _____

- ✓ Standard work clothes/DOE coveralls
 - ✓ Hard hat, steel toed boots, safety glasses
 - ✓ Ear protection during drill rig operation
 - 2pr. ✓ Inner ^{nitrile} latex gloves
 - ____ Outer NBR gloves
- NOTE: HARD hat to be worn when within 5 feet of Geoprobe operation, or if overhead hazards are present. Orange vest required when within 20 feet of Geoprobe van when moving.
- Follow RWP

Where air purifying respirators are authorized, N/A are the appropriate canisters/cartridges for use with the specific substances and concentrations anticipated. Cartridges shall be replaced at the start of each work day.

NO CHANGES TO THE SPECIFIED LEVELS OF PROTECTION SHALL BE MADE WITHOUT THE KNOWLEDGE AND APPROVAL OF THE HEALTH AND SAFETY OFFICER AND THE PROJECT MANAGER

8

20. Onsite Organization and Coordination See attached

Project Manager: Annette PRIMROSE

Field Team Leader: FRED GRIGSBY/John Boylan

Site Safety Officer: HAROLD SANCHEZ

Field Team	Name	Job Function
	John Boylan	Team Lead/Geologist
	Kim Jackson	Geoprobe operations/Sampling Operations
	Ray Michaels	"
	GREG Stretecky	"
	Harold Sanchez	HSS

21. Special Instructions

Follow RWP for PPE requirements

PID/FID monitoring for VOCs (Do not exceed limits in BZ)

Follow HSS/RCT recommendations - IF above 10ppm, back away, allow to vent.

HARD HATS will be worn within 5 feet of geoprobe operations

Hearing Protection will be worn when hammer is in use.

No eating, drinking or gum chewing in the Exclusion Zone or in the rad controlled area.

HSS will monitor for heat and cold stress as necessary. Visual signs, thermometer will be used

18. Confined Entry Procedures

☒ Not Applicable

Yes N/A

☐ Provide Forced Ventilation☐ Test Atmosphere For:☐ (a) O_2 ☐ (b) %LEL☐ (c) Other

Descriptions/Other:

Yes N/A

☐ Refer to Personal Protective Equip. (#16)☐ Refer to Emergency Procedures (#29)☐ Other Special Procedures

19. Cutting/Welding Procedure

☒ Not Applicable

Yes N/A

☐ Relocate or Protect Combustibles☐ Wet Down or Cover Combustible Floor☐ Check Flammable Gas Concentrations (%LEL) in air☐ Cover Wall, Floor, Duct and Tank Openings☐ Provide Fire Extinguisher

Other Special Instructions:

24. Emergency Procedures This page is to be posted at prominent location on site.

Yes No

☒

☐

On-site Communications Required?

Emergency Channel #2911 Medical
#2911 Fire/Security

Nearest Telephone 7891 0

Fire and Explosion

In the event of a fire or explosion, if the situation can be readily controlled with available resources without jeopardizing the health and safety of yourself, the public, or other site personnel, take immediate action to do so, otherwise:

1. Notify emergency personnel by calling 2911.
2. If possible, isolate the fire to prevent spreading.
3. Evacuate the area

Chemical Exposure

Site workers must notify the site health and safety officer immediately in the event of any injury or any of the signs or symptoms of overexposure to hazardous substances identified below:

Substances Present

Symptoms of Acute Exposure

First Aid

13

22. Sanitation Requirements

Potable water supply available on work site?

☒ Yes

Portable toilets required on work site?

☐ Yes If Yes, how many? _____
☒ No

Temporary washing/shower facilities required at work site?

☐ Yes If yes, describe below.
☒ No If no, state location
existing facilities.

Description: Toilets and washing facilities are
available in the contractors yard.

23. Field Procedures Change Authorization

Instruction Number
to be changed

Duration of Authorization Requested
☐ Today only
☒ Duration of Task

Date: 4/23/97

Description of Procedures Modification:

Justification:

Person Requesting Change:

Annette PRIMROSE

Name

Verbal Authorization Received From:

Name

Time

SR. PROJECT MANAGER

Title

Title

Annette Primrose

Signature

Approved By

(Signature of person named above to be obtained
within 48 hours of verbal authorization)

12

24. Emergency Procedures - Cont'd

On Site Injury Or Illness

In the event of an injury requiring more than minor first aid, or any employee reporting any sign or symptom of exposure to hazardous substances, immediately take the victim to MEDICAL FACILITY located at 8122, phone 2911. In the event of life-threatening or traumatic injury, implement appropriate first-aid and immediately call for emergency medical assistance at 2911. The nearest designated trauma center is MEDICAL FACILITY located at 8122, phone 2911.

SEE ATTACHED MAP

Designated Personnel Current in First Aid/CPR (Names)

<u>HAROLD SANCHEZ</u>	<u>HSS</u>
<u>Peggy Schreckengast</u>	<u>IH</u>

In the event of an injury or accident, contact FRED GRIGSBY x 7728 dp 7469
or Annette PRIMROSE x 4385, dp 4675
Designated Back-Up Personnel (Names) Function

Required Emergency Back-Up Equipment

Emergency Response Authority

HAROLD SANCHEZ is the designated site emergency coordinator and has final authority for first response to on-site emergency situations.

Upon arrival of the appropriate emergency response personnel, the site emergency coordinator shall defer all authority but shall remain on the scene if necessary to provide any and all possible assistance. At the earliest opportunity, the site safety officer or the site emergency coordinator shall contact the project coordinator or health and safety officer.

Project Coordinator _____ Phone (w) _____ (h) _____

Health and Safety Officer HAROLD SANCHEZ Phone (w) 966-4953 (h) 985-2575

25. Safety Briefing

The following personnel were present at pre-job safety briefing conducted at _____ (time) on _____
_____ (date) at _____ (location), and have read the above plan and are familiar
with its provisions:

Name	Signature
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Fully charged ABC Class fire extinguisher available on site? YES ____
Fully stocked First Aid Kit available on site? YES ____
All project personnel advised of location of nearest phone? YES ____
All project personnel advised of location of designated medical facility or facilities? YES ____

Printed Name of Field Team Leader or Site Safety Officer

Signature Date

15

Concentrations of VOC Contaminants in IHSS 119.1 and Downgradient Groundwater

Table 1. Maximum Contaminant Concentrations in IHSS 119.1 Groundwater (modified from RMRS 1996a)

Well No.	Compound	Range of Concentrations (ug/L)
0974	Carbon Tetrachloride	Nondetect to 28,000
	1,1-Dichloroethene	Nondetect to 48,000
	1,1,1-Trichloroethane	Nondetect to 30,250
	Tetrachloroethene	430 to 13,200
	Trichloroethene	1,300 to 72,000
1074	Carbon Tetrachloride	441 to 5,000 E
	1,1-Dichloroethene	Nondetect to 140
	1,1,1-Trichloroethane	Nondetect to 312
	Tetrachloroethene	Nondetect to 49
	Trichloroethene	258 to 3,600
4387	Carbon Tetrachloride	Nondetect to 2,995
	1,1-Dichloroethene	Nondetect to 32,687
	1,1,1-Trichloroethane	Nondetect to 15,000
	Tetrachloroethene	64 to 7,590
	Trichloroethene	140 to 15,540

E - Concentration exceeded calibration range of analytical equipment

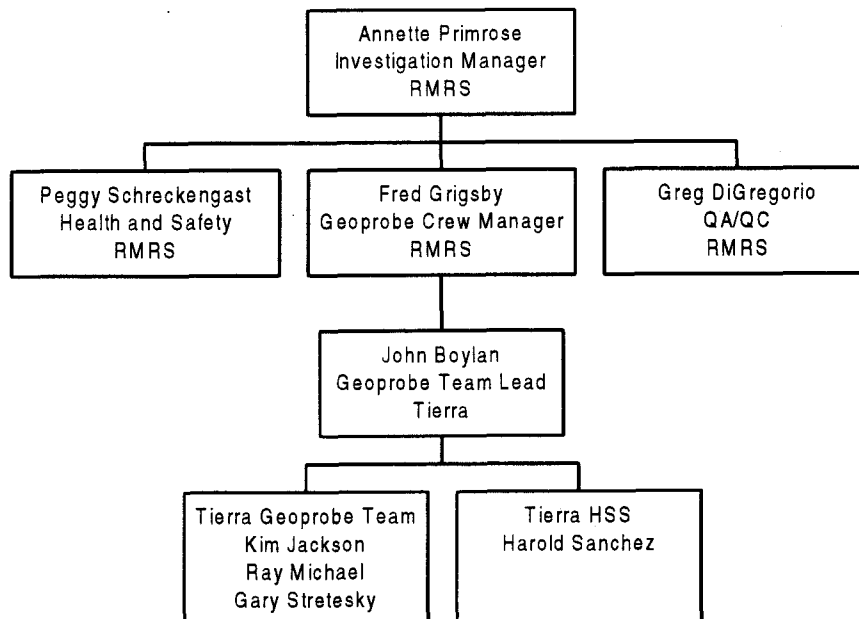
Table 2. Range of Contaminant Concentrations in Groundwater from Downgradient Wells

Well No.	Compound	Range of Concentrations (ug/l)
0487	Carbon Tetrachloride	Nondetect to 2,600 (330)*
	1,1-Dichloroethene	Nondetect to 14
	1,1,1-Trichloroethane	Nondetect to 20
	Tetrachloroethene	Nondetect to 590 (84)*
	Trichloroethene	Nondetect to 9,500 (1,200)*
32591	Carbon Tetrachloride	Nondetect to 0.1 J
	1,1-Dichloroethene	Nondetect to 6
	1,1,1-Trichloroethane	Nondetect to 2
	Tetrachloroethene	Nondetect to 3
	Trichloroethene	274 to 900

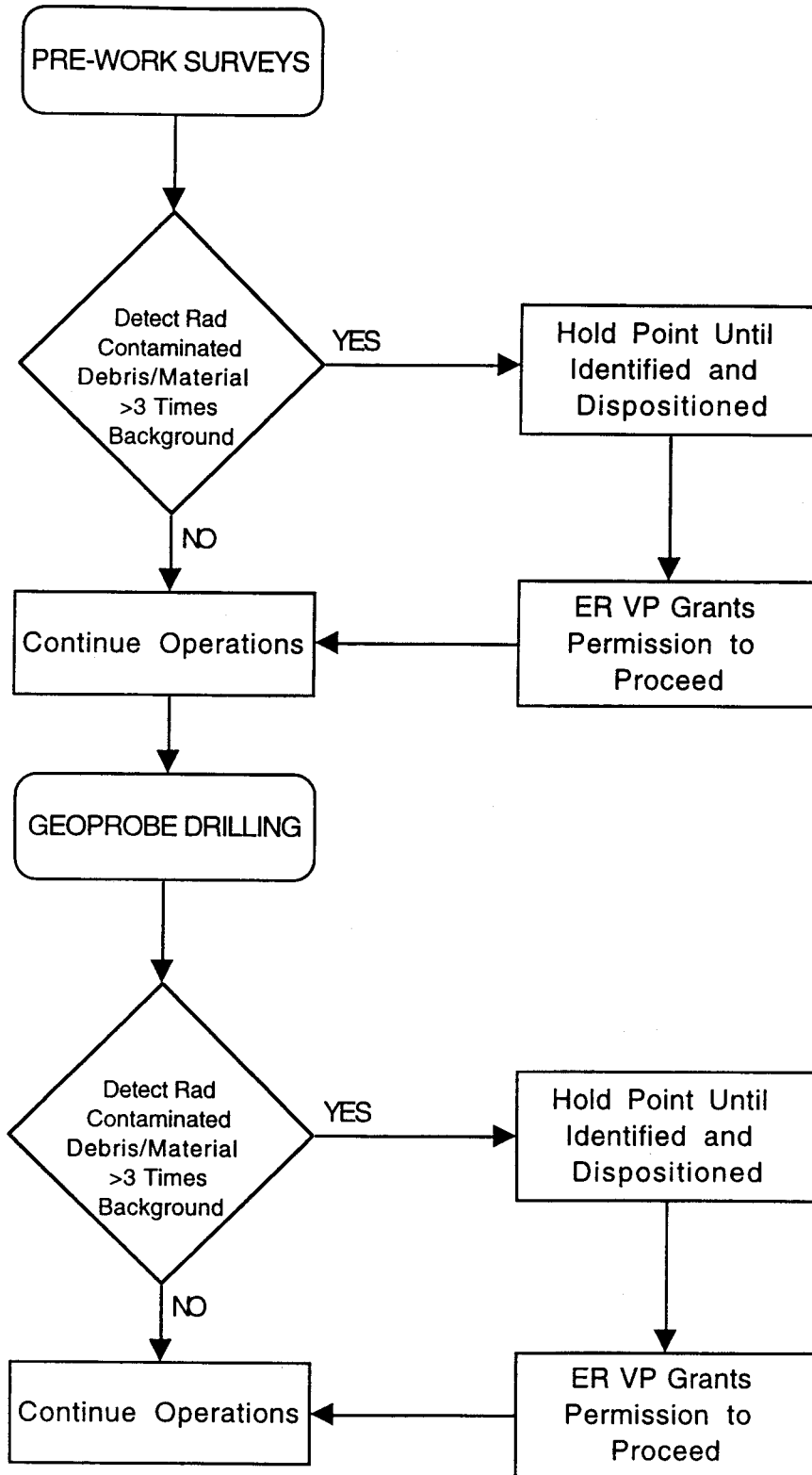
*Highest concentrations present if October 22, 1992 samples are excluded

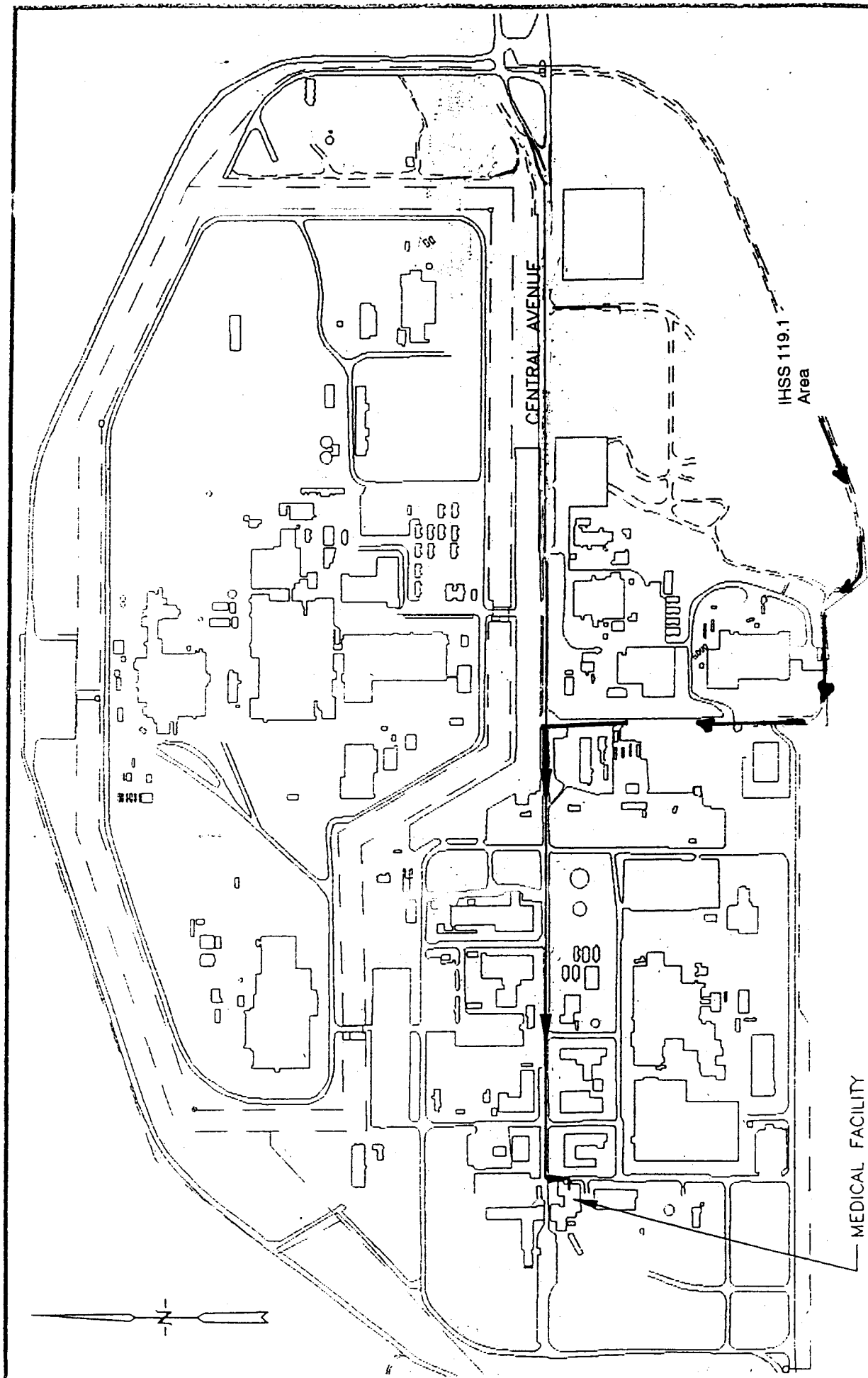
J - concentration detected below the detection limit

IHSS 119.1 Investigation Organization Chart



119.1 INVESTIGATION RADIOLOGICAL SUSPENSION LIMITS





ROUTE TO RFETS
MEDICAL FACILITY (BLDG 122)
Figure 1

Activity Hazard Analysis for Health and Safety Plan Addendum for SW059 Site Characterization

ROCKY MOUNTAIN REMEDIATION SERVICES		
ACTIVITY HAZARD ANALYSIS		
JOB/PROJECT:	IHSS 119.1 Area Characterization	
ACTIVITY DESCRIPTION:	Geoprobe soil cores and samples	
Activity	Potential Hazard	Protective Control Measures
1) Geotechnical investigation including soil cores and sampling	Slips, trips, and falls	Pre-activity work area survey to identify potential hazards associated with operations. Hazard assessment per section
	Exposure to airborne radioactive or chemical contaminants	On-site monitoring requirements will be established prior to project implementation per section 7.2*.
	Dermal exposure with radioactive or chemical contaminants in soils and groundwater.	Establish monitoring program prior to operations. Define appropriate level of PPE.
	Mechanical/hydraulic hazards	Pre-work safety discussion and procedures identified in section 6.2.7*.
	Noise exposure	Hearing protection will be required during geoprobe hammer operations.
	Electrical hazards	Clearances will be maintained per the excavation permit.
	Underground/above-ground utilities	Utility clearances will be performed as part of obtaining an excavation permit.
	Cold stress/heat stress	Pre-work discussion to ensure awareness. And follow guidance in section 7.3*.
2) Equipment decontamination	Contact with potentially contaminated rinse water	Personal PPE will be defined prior to decon operations (see Section 17)
	Similar exposure hazards as identified above.	PPE and monitoring requirements consistent with geotechnical operations.
	High pressure steaming, as appropriate	PPE as described in section 7.0*.
H&S TRAINING:		
SPECIAL EQUIPMENT:		
CRAFT FOREMAN CONCURRENCE:		
H&S CONCURRENCE:	M.D. Scheckungst	4-25-97
CONSTRUCTION SUPERINTENDANT CONCURRENCE:		
* refers to the appropriate section in the Final Health and Safety Plan , Groundwater Monitoring Program RF/ER-SAF-94-GMP		

119.1 Investigation Response to Unknown Hazards

In the event that unexpected hazards or conditions are encountered during investigation activities, the project activities will pause to assess the potential hazard or condition. The project manager and field manager will be notified immediately, as well as the RMRS Safety officer. The potential hazard or condition will be evaluated to determine the severity or significance of the hazard or condition, and whether the controls on the project are sufficient to address the hazard or condition. Based on this initial evaluation, a determination will be made whether to proceed with controls currently in place; segregate the condition or hazard from the project activity, if it can be done safely, or curtail operations to address the unexpected hazard or condition. Concurrence down the selected path must be obtained from the RMRS ER Vice President, Ann Tyson, or her designee.

Table 1. Emergency Contact Telephone and Pager Numbers

Fire	x. 2911	Poison Center	629-1123
Ambulance	x. 2911	Security	x. 2911

Nearest Emergency Medical Services Are Located At **Building 122 as shown on the attached map.**

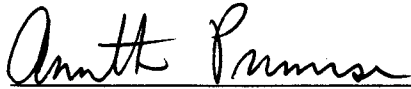
Nearest telephone is located at: **T893 B**

Additional Project Telephone Numbers

Vice President - ER - Ann Tyson	x4829/d1101
H&S Manager - Ken Jenkins	x5374/d7455
Project Manager - Annette Primrose	x4385/d4675
Field Manager/Geologist - Fred Grigsby	x7728/d7469
H&S Supervisor - Peggy Schreckengast	x6790/d3059
HSS - Harold Sanchez	x4953
HAZMAT Emergency Response	x2911
Occupational Health General Information	x2594

Note: d = digital page, the digital page system can be activated on plantsite by dialing extension 4000, then following the instructions.

The following signatures represent approval of the Special Task Health and Safety Plan for the IHSS 119.1 and Downgradient Investigation. This Special Task Health and Safety Plan is an addendum to the Health and Safety Plan for the Groundwater Monitoring Program. This Special Task Health and Safety Plan covers work during the period of April 29, 1997 through June, 1997.



Annette Primrose, Project Manager

4/29/97

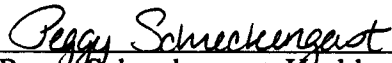
Date



Scott Newsom, Radiological Engineer

4/29/97

Date



Peggy Schreckengast, Health and Safety Supervisor

4-29-97

Date